

**Refine Search**10/6/77,008**Search Results -**

Terms	Documents
(PCMO near2 layers) and ((etch or etching) near5 PCMO)	2

**Database:** US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Search:** **Search History****DATE:** Monday, March 21, 2005 [Printable Copy](#) [Create Case](#)**Set Name** Query  
side by side**Hit Count** **Set Name**  
result set*DB=USPT; PLUR=YES; OP=ADJ*

<u>L4</u>	(PCMO near2 layers) and ((etch or etching) near5 PCMO)	2	<u>L4</u>
<u>L3</u>	(PCMO near2 stack)	0	<u>L3</u>
<u>L2</u>	(PCMO near2 stack) and (etch or etching)	0	<u>L2</u>
<u>L1</u>	(PCMO near2 stack) and ((etch or etching) near5 PCMO)	0	<u>L1</u>

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### Search Results - Record(s) 1 through 2 of 2 returned.

1. Document ID: US 6774004 B1

L4: Entry 1 of 2

File: USPT

Aug 10, 2004

US-PAT-NO: 6774004

DOCUMENT-IDENTIFIER: US 6774004 B1

TITLE: Nano-scale resistance cross-point memory array

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw
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2. Document ID: US 6746910 B2

L4: Entry 2 of 2

File: USPT

Jun 8, 2004

US-PAT-NO: 6746910

DOCUMENT-IDENTIFIER: US 6746910 B2

TITLE: Method of fabricating self-aligned cross-point memory array

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
(PCMO near2 layers) and ((etch or etching) near5 PCMO)	2

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LS: Entry 1 of 2

File: USPT

Aug 10, 2004

DOCUMENT-IDENTIFIER: US 6774004 B1

TITLE: Nano-scale resistance cross-point memory array

Detailed Description Text (12):

The first embodiment of the method of the invention uses TiN as a hard mask during etching of the memory resistor, such as PCMO. The other materials, such as SiN, TaN, WN, etc., may also be used as hard mask.

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[First Hit](#) [Fwd Refs](#)[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)**End of Result Set** [Generate Collection](#) [Print](#)

L5: Entry 2 of 2

File: USPT

Jun 8, 2004

DOCUMENT-IDENTIFIER: US 6746910 B2

TITLE: Method of fabricating self-aligned cross-point memory array

Brief Summary Text (10):

A method of fabricating a self-aligned cross-point memory array includes preparing a substrate, including forming any supporting electronic structures; forming a swell area on the substrate; implanting ions to form a deep N.sup.+ region; implanting ions to form a shallow P+ region on the N.sup.+ region to form a P+/N junction; depositing a barrier metal layer on the P+ region; depositing a bottom electrode layer on the barrier metal layer; depositing a sacrificial layer of polysilicon or silicon nitride on the bottom electrode layer; patterning and etching the structure to remove portions of the polysilicon layer, the bottom electrode layer, the barrier metal layer, the P+ region and the N.sup.+ region to form a trench; depositing oxide to fill the trench; patterning and etching the polysilicon; depositing a PCMO layer which is self-aligned with the remaining bottom electrode layer; depositing a top electrode layer; patterning and etching the top electrode layer; and completing the memory array structure.

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Search Results - Record(s) 1 through 2 of 2 returned.

1. Document ID: US 6774004 B1

L5: Entry 1 of 2

File: USPT

Aug 10, 2004

US-PAT-NO: 6774004

DOCUMENT-IDENTIFIER: US 6774004 B1

TITLE: Nano-scale resistance cross-point memory array

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	PCMC	Draws
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2. Document ID: US 6746910 B2

L5: Entry 2 of 2

File: USPT

Jun 8, 2004

US-PAT-NO: 6746910

DOCUMENT-IDENTIFIER: US 6746910 B2

TITLE: Method of fabricating self-aligned cross-point memory array

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	PCMC	Draws
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Terms	Documents
PCMO near3 (etching or etch)	2

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### Search Results -

Terms	Documents
PCMO near3 (etching or etch)	2

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**Search:**

L5

Refine Search

Recall Text

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### Search History

DATE: Monday, March 21, 2005 [Printable Copy](#) [Create Case](#)

Set Name Query  
side by side

Hit Count Set Name  
result set

DB=USPT; PLUR=YES; OP=ADJ

<u>L5</u>	PCMO near3 (etching or etch)	2	<u>L5</u>
<u>L4</u>	(PCMO near2 layers) and ((etch or etching) near5 PCMO)	2	<u>L4</u>
<u>L3</u>	(PCMO near2 stack)	0	<u>L3</u>
<u>L2</u>	(PCMO near2 stack) and (etch or etching)	0	<u>L2</u>
<u>L1</u>	(PCMO near2 stack) and ((etch or etching) near5 PCMO)	0	<u>L1</u>

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L7: Entry 1 of 1

File: USPT

Feb 17, 2004

DOCUMENT-IDENTIFIER: US 6693821 B2

TITLE: Low cross-talk electrically programmable resistance cross point memory

## CLAIMS:

7. A memory structure comprising; a) a silicon substrate; b) a plurality of platinum bottom electrodes overlying the substrate; c) a plurality of platinum top electrodes overlying the bottom electrodes, wherein the top electrodes cross over the bottom electrodes forming a cross point at each cross over location; and d) a single layer of  $Pr_{0.7}Ca_{0.3}MnO_3$  (PCMO) interposed between the plurality of top electrodes and the plurality of bottom electrodes at each cross point.

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## Refine Search

### Search Results -

Terms	Documents
(top near2 electrode) and (bottom near2 electrode) and PCMO and (etch or etching)	12

**Database:**  US Pre-Grant Publication Full-Text Database  
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side by side		result set
DB=USPT; PLUR=YES; OP=ADJ		
<u>L9</u> (top near2 electrode) and (bottom near2 electrode) and PCMO and (etch or etching)	12	<u>L9</u>
<u>L8</u> l7 and etch	0	<u>L8</u>
<u>L7</u> (plurality near4 PCMO)	1	<u>L7</u>
<u>L6</u> (stacks or stack) near9 PCMO	0	<u>L6</u>
<u>L5</u> PCMO near3 (etching or etch)	2	<u>L5</u>
<u>L4</u> (PCMO near2 layers) and ((etch or etching) near5 PCMO)	2	<u>L4</u>
<u>L3</u> (PCMO near2 stack)	0	<u>L3</u>
<u>L2</u> (PCMO near2 stack) and (etch or etching)	0	<u>L2</u>
<u>L1</u> (PCMO near2 stack) and ((etch or etching) near5 PCMO)	0	<u>L1</u>

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1. Document ID: US 6859382 B2

L9: Entry 1 of 12

File: USPT

Feb 22, 2005

US-PAT-NO: 6859382

DOCUMENT-IDENTIFIER: US 6859382 B2

TITLE: Memory array of a non-volatile ram

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KOMC](#) [Drawings](#)

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2. Document ID: US 6858905 B2

L9: Entry 2 of 12

File: USPT

Feb 22, 2005

US-PAT-NO: 6858905

DOCUMENT-IDENTIFIER: US 6858905 B2

TITLE: Methods of manufacturing low cross-talk electrically programmable resistance cross point memory structures

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KOMC](#) [Drawings](#)

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3. Document ID: US 6856536 B2

L9: Entry 3 of 12

File: USPT

Feb 15, 2005

US-PAT-NO: 6856536

DOCUMENT-IDENTIFIER: US 6856536 B2

TITLE: Non-volatile memory with a single transistor and resistive memory element

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KOMC](#) [Drawings](#)

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4. Document ID: US 6841833 B2

L9: Entry 4 of 12

File: USPT

Jan 11, 2005

US-PAT-NO: 6841833

DOCUMENT-IDENTIFIER: US 6841833 B2

TITLE: 1T1R resistive memory

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Drawn](#)

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5. Document ID: US 6825058 B2

L9: Entry 5 of 12

File: USPT

Nov 30, 2004

US-PAT-NO: 6825058

DOCUMENT-IDENTIFIER: US 6825058 B2

TITLE: Methods of fabricating trench isolated cross-point memory array

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Drawn](#)

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6. Document ID: US 6809753 B2

L9: Entry 6 of 12

File: USPT

Oct 26, 2004

US-PAT-NO: 6809753

DOCUMENT-IDENTIFIER: US 6809753 B2

TITLE: Optical microswitch printer heads

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Drawn](#)

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7. Document ID: US 6774054 B1

L9: Entry 7 of 12

File: USPT

Aug 10, 2004

US-PAT-NO: 6774054

DOCUMENT-IDENTIFIER: US 6774054 B1

TITLE: High temperature annealing of spin coated Pr<sub>1-x</sub>CaxMnO<sub>3</sub> thim film for RRAM application

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Drawn](#)

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8. Document ID: US 6774004 B1

L9: Entry 8 of 12

File: USPT

Aug 10, 2004

US-PAT-NO: 6774004

DOCUMENT-IDENTIFIER: US 6774004 B1

TITLE: Nano-scale resistance cross-point memory array

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KMC](#) | [Drawn](#)

9. Document ID: US 6762481 B2

L9: Entry 9 of 12

File: USPT

Jul 13, 2004

US-PAT-NO: 6762481

DOCUMENT-IDENTIFIER: US 6762481 B2

TITLE: Electrically programmable nonvolatile variable capacitor

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIDC](#) | [DiseqD](#) 10. Document ID: US 6746910 B2

L9: Entry 10 of 12

File: USPT

Jun 8, 2004

US-PAT-NO: 6746910

DOCUMENT-IDENTIFIER: US 6746910 B2

TITLE: Method of fabricating self-aligned cross-point memory array

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KIDC](#) | [DiseqD](#)[Clear](#) | [Generate Collection](#) | [Print](#) | [Fwd Refs](#) | [Bkwd Refs](#) | [Generate OACS](#)

Terms	Documents
(top near2 electrode) and (bottom near2 electrode) and PCMO and (etch or etching)	12

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11. Document ID: US 6583003 B1

L9: Entry 11 of 12

File: USPT

Jun 24, 2003

US-PAT-NO: 6583003

DOCUMENT-IDENTIFIER: US 6583003 B1

TITLE: Method of fabricating 1T1R resistive memory array

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Drawn Ds
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12. Document ID: US 6204139 B1

L9: Entry 12 of 12

File: USPT

Mar 20, 2001

US-PAT-NO: 6204139

DOCUMENT-IDENTIFIER: US 6204139 B1

TITLE: Method for switching the properties of perovskite materials used in thin film resistors

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Drawn Ds
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Terms	Documents
(top near2 electrode) and (bottom near2 electrode) and PCMO and (etch or etching)	12

**Display Format:** TI

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